



By the King.

To all Noblemen, Gentlemen, and other our louing Subicets, to whom it may appertaine.



Heras Arthur Standish Gentleman, hath taken much paines and beene at great charges in composing and publishing in a Booke, some proiects

for A 2

for the increasing of VV oods; the decay whereof in this Realme is vniuerfally complained of; And therefore We would be glad that any invention might further the restoring thereof; We have therefore beene pleased to giue allowance to his Booke, and to the Printing thereof. And if the same shall be willingly received of such of the Gentlemen, and others of ability, who have grounds fitting for his proiects, It shall much content Vs, doubting not but that fuch as shall thinke good to make vie of the Booke, will deale worthily with him for his pains. And Wee are also pleased for the better encouragement of the said Standish, hereby to declare, That our pleasure is, that no Person or Persons whatsoeuer shall Print any of the said Books, Books, but for and to the vse of the said Standish, and none others.

Given under our Signet at Andeuer the first day of August, in the ninth yeere of our Reigne of England, Fraunce, and freland, and of Scotland the five and fortieth.

God saue the King.



Books, but for and to the vie of the laid. Standiff, and none others. Ginen ander our Sinust at Andruce the first aday of the gust, in the minute year out our Reigne of England, France and

COMMONS COMPLAINT

WHEREIN IS CONTAL-NEDTWOSPECIALL

GRIEVANCES:

The first, the generall destruction and waste of Woods in this Kingdome, with a remedy for the same: Also how to plant Wood according to the nature of enery soile, without losse of ground, and how thereby many more, and better Cattellmay be yearely bred, with the charge and profit that yearely may arise thereby.

THE SECOND GRIEVANCE IS, THE EX-TREAME DEARTH OF VICTVALS.

Foure remedies for the same:

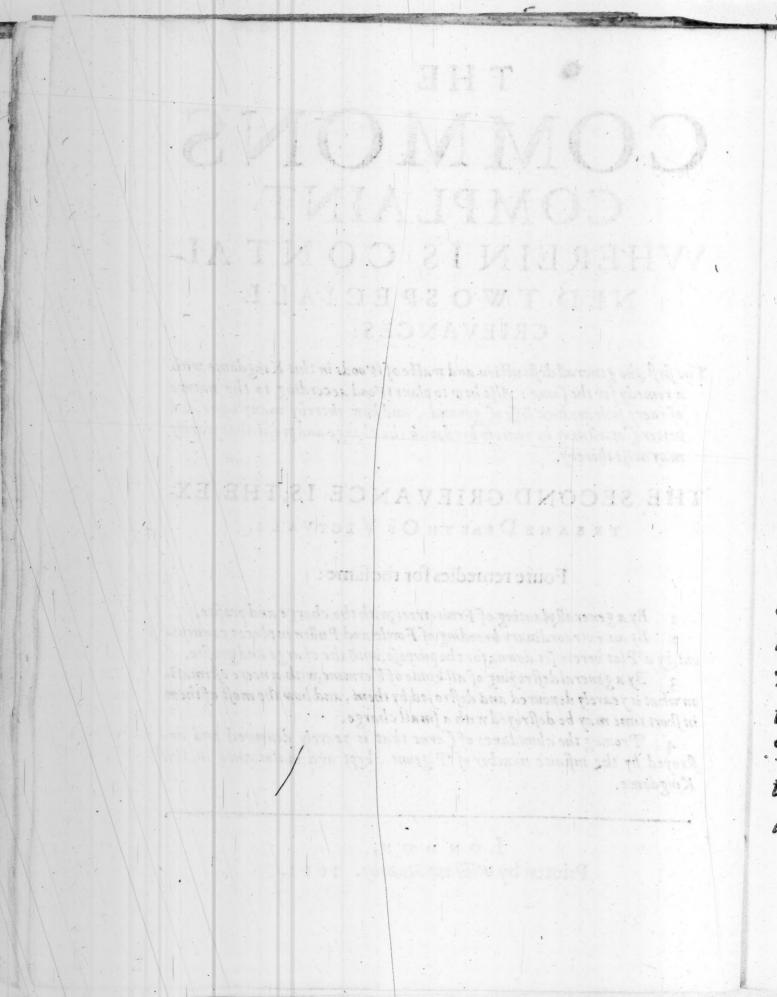
1 By a generall planting of Fruit-trees, with the charge and profite.

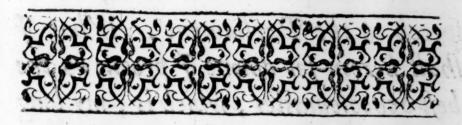
2 By an extraordinary breeding of Fowle and Pullen in places convenient, by a Plot herein set downe for the purpose, with the charge and profite.

3 By a general destroying of all kinde of Vermine, with a neere estimation what is yearely denoured and destroyed by them, and how the most of them in short time may be destroyed with a small charge.

4 Proving the abundance of Corne that is yearely devoured and defroyed by the infinite number of Pigeons, kept and maintayned in this Kingdome.

> London, Printed by William Stansby. 1611.





To the Kings most excellent MAIESTIE.

EXT unto God, most dread Soueraigne, the oue and duty that I owe onto your Maiestie and Kingdom, bath imboldned me to Dedicate the fruits of my old age and trauell onto your Highnesse, hoping that the subject thereof will no may offend you: since it is intended to the good of your Maiestie and your Royall Progenie, the generall good of the Common wealth for all posterities and in part tendeth to your Princely Speech

The Epistle Dedicatory.

Speech to the Parliament. What F shall herein set downe I produe by the best Schoolemaster, which is, my long experience, bauing spent many yeares in the attaining thereunto, especially these foure last yeares, wherein I have imployed my study and trauell through Some parts of most of the Countries of this Kingdome for this purpose, oft hauing conference with many of the best Commonwealths-men for my better understanding; desiring by all good meanes to attaine to a perfect knowledge bor to Plant, preserue, and maintaine the blessings of God, as well in this our destroying age, as they have beene in former times, wherein was lest a precedent and plentie of that which is now in effect destroyed. All aregiuen to take the profite present, but few or none at all regard

The Epistle Dedicatory.

regard the posteritie or future times. This exercise in all ages hath beene in high account with the wifest and most worthiest, and bath beene blessed by God himselfe, (as hath appeared to the world:) and by the approbation of your Maiestie, may be so put in execution, as the branches thereof may be spread ouer all your Dominions, to the disburdening of your louing Subjects of all their grieuances present and to come. Ispare to proceede any further, since your Maiestie, whom God hath filled with the spirit of wisedome in understanding, by your ready apprehension understandeth much more then I can speake hereof. Thus submitting my poore labours, or rather worthlesse mite, to the consideration of your Royall Maiesty, having nothing else to pre-Sent

The Epistle Dedicatory.

Sent the same withall, but my humble prayers to the King of Kings, to multiply the gifts of his holy Spirit more and more vpon you, and that you may Reigne many happy yeares amongst vs.

Your Highnesse most

humble Subiect,

ARTHUR STANDISH.



TO THE READER.



der, brought home vnto thee not onely the haruest of my long experience, but also the opinion of many hundreds that I have con-

uersed withall, who haue beene eyther the actors of some of these proiects herein contained, or the eye-witnesses thereof, with little labour or cost vnto thy selfe, wherin thou mayest plainely according to the nature of euery Soile, learne how to plant such profites as naturally our Countrey hath, and will affoord for the profit of thy selfe and Country. First, how to plant Wood, and how to breed Cattell to a greater number, yearely to thy great gaine, as shall plainly be proued. In the second, the profite of planting Fruit-trees in Hedges or Orchards, as of Apples, VV ardens, Peares, VVal-nut and Ches-nut trees; being no strange nouelties, although by want of industry they are made strange vnto vs, by our buy-

To the Reader.

buying them from forraigne Countries at a deare rate, by our flouth and negligence; whereas by the blessing of God, the very soile of our Hedges is such, as they would yeelde great plentie, without hindring any other profite, and may be gained with lesse cost and labour, then any other commodicie in this Kingdome what soeuer, as shall here. in beproued. In the third, the manner how to breede Fowle and Pullin, by a secure plot from stealing, and from vermine. Lastly, how by a speedy meanes to destroy all kinde of Vermine, especially the feathered kinde, with a neere estimation what is yearely destroyed by vermine and Pidgeons, both in Corne and other things. By meanes thereof, not only Corne, but especially other victuals is brought and doth continue at too deare a rate, for the poore Artificer and labouring man; by which dearth, too oft ariseth dilcontentments, and mutinies among the common sort, as appeared of late by a grieuancetaken onely for the dearth of Corne in VVarwicke-shire, Northampton-shire, and other places, about which time the mindes of many were molested: wherupon I tooke the

To the Reader.

the first occasion to imploy my studie and trauell in this busines, hoping by Gods helpe to preuent such inconveniencies, as too oft doe spring out of the desperate tree of want. VVherupon good Reader, it ensueth, that by the obseruing of these small directions, thou mayest perform some part of the cause of thy creation, by giving glory to thy Creator, honour pleasure, and profite to thy king, countrey, and to thy selfe also, by feeling and relieuing thy Christian brothers wants, and by a charitable industrie, thou maist raise meanes to disburthen them of all their grieuances, and in the end, by the mercie of our good God, thou maist be partaker of his louing promises in the Gospell, Come yee blessed of my Father, &c. The which I craue for lesus Christ his fake.

B 3

Vpon

CARLES CONTRACTOR STATE OF THE STATE OF ductioning out of sacrife principle A SECTION OF THE PROPERTY OF T All Avidnesson de surgomon montre de vano cications by dumpe classic Carlotte Carlotte A the visit of the business and the same of the same o Enal and a rest or death and a virginia and in threed, by the incesic bit pure Sod a thought of part ker of his I



VPON THE AVTHOUR AND HIS most commendable and necessary worke.

Or methy paines and subject to commend

(Each praising each by their dumbe silence best)

Were Candle-light unto the Sunne to lend,

Send Owles to Athens, paint the Phænix brest;

Give Flora Garlands, Loue his Myrtle bow,

Arabia odours, pearle to Thetis brow.

But lo the Genius of faire Britain by,
Commands me speake, to give thee thy desert,
who art so carefull of posterity,
And present times unru'd of greater part:
Swering by Thames her hopes are more by Standish,
Then all the gold she got by Drake or Candish.

Henry Peacham.



TO GOD, THE ONELY WISE AND ALL-CREATOR.

This worke of mine do thou (Oh Lord) so blesse, That enemies who doe thy servant hate, May pine to see, by thee his happinesse:

And how thou dost protect his poore estate.

For who shall ever his confusion see,

That left alone, doth put his trust in thee?

MATTH. 6.33.

First seeke the Kingdome of God and his right cousnesse, and all things shall be ministred unto you.

Psal. 1. 3.
What soeuer he [the man that loueth Gods word] doth,
shall prosper.

THE





THE COMMONS COMPLAINT.

Ee doe in all humblenesse complaine vnto your Maiesty of the generall destruction and waste of wood, made within this your Kingdome, more within twenty or thirty last yeares, then in any hundred

yeares before. Little respect is taken but by your Maiestie, for the posterity and prosperity of your Kingdome; too many destroyers, but few or none at all doth plant or preserue: by reason thereof there is not Tymber left in this Kingdome at this instant onely to repaire the buildings thereof another age, much leffe to build withall : whereby this grieuance doth daily increase. Thereasons are many: first, the want of fire is expected, without the which mans life cannot bee preferued: secondly, the want of Timber, Brick, Tyle, Lime Iron, Lead and glaffe for the building of habitations; Timber for the maintaining of husbandry, for nauigation, for vessels, for bruing and the keeping of drinke, and all other necessaries for housekeeping: barke for the tanning of Leather, bridges for trauell, pales for parkes,

parkes, poles for Hops, and salt from the Wiches. The want of wood is, and will bee a great decay to tillage, and cannot but be the greatest cause of the dearth of corne, and hindereth greatly the yearely breeding of many cattell by reason that much straw is yearely burned, that to the breeding of cattell might be imployed: the want of wood in many places of this kingdome, constraineth the foyll of cattell to bee burned, which should bee imployed to the strengthning of land, and so doth the want of hurdles for the folding of sheepe, and the want of wood causeth too many great losses by fire, that commeth by the burning of straw, and so it may be conceived, no wood, no Kingdome.

The remedies may be thus:

F that all owners of land, according to the nature of the soile wherein their lands do lie, were enjoyned to plant all their hedges with wood, (and not onely with thornes as too many doe) imagining that wood will hinder the growth of their thornes, and fo hinder the strength of their fence; which is not so, if the wood and the thornes be planted together, as may well appeare to those that marke it well; which if it should, I hope it will be graunted, and shall hereby appeare, that there is no comparison to be made between the profite of wood and thornes) fo thicke as conveniently trees may grow and prosper, which may be two at the least in every poll, to be topped and lopped for fire wood; referring some part of their hedges to plant fruit trees in, as Apples, Wardens, Peares, Wal-nut or Chef-nut-trees, which may yeelde no lesse profite : for the

the Tymber of the Wal-nut-tree is for many vies very good and profitable, and the Chef-nut-tree is very lasting tymber, as appeareth by foure principall posts in the hall at Farnam Castle, which is said, was builded before, or in the time that King Arthur reigned in this Kingdome. The Wal-nut would be fet about Michelmas, when the greene coate is on it; and the Wal nuts must be steeped three dayes and nights in milke before it be set, and watered the first two Sommers, if they be drie: and further to plant foure trees for every acre, to be preserued for tymber, for so many yeares before any of them should be felled; as the trees may be growne to be good tymber, which may be foure score yeares: and that after the trees be growne to be tymber, that none should be felled, or at any time before or after wasted, but so many to be planted and continued, (as it is said the King of Spaine hath enacted, for the better continuance of the Iron works in his Dominions) and further, that all such persons as have at this instant their grounds furnished with wood in such fort as is required, might be also injoyned to continue the same, and to preserve so many Timber trees, and so many for fire wood, as hereafter they may fell or waste. And that all Tenants might be injoyned to doe the like, and fo haue sufficient Timber for all vses belonging to his Tenement, and sufficient fire-wood for all purposes belonging to his house, or bettering of his Lands by burning of Lime, or what else, making no waste, for the better encouragement, in lieu of his charge and paines. This being performed, it shall appeare to bee the best proiect that hath beene offered in our age, as the cafe standeth with the Kingdome, by the scarcity that is, and like

like to grow vnto, confidering that it may be performed with fo finall a charge, and continued with fo litle labour. And for the better conceiuing thereof; admit that a man haue onely fourescore acres in his occupation of Pasture ground, wherein he yearely feedeth or breedeth twenty cattell, or keepeth twenty milch kine; and that he should for this purpose inclose source hodes (which is an acre) in foure feuerall corners of the foure fcore acres; the which corners are already inclosed for the fences of the same closes, and is so to be maintained notwithstanding this deuice, so the rest that is to be done, is but ten poll in length, and foure in bredth: the which fourteene poll for one rhode, may cost to be wel ditched and double quick-set eight pence apoll, nine shillings foure pence: a hedge on the outside to saue the quicke wood fixe pence a poll, which will last well three yeares, and then to be hedged a new, that may cost other sixe pence a poll, fourteene shillings. In the Sommers before these rhodes of ground are to be inclosed, there must be digged sourcescore severall plots, in every rhode of a yarde square, three yardes lacking three inches betweene plot and plot euery way, which is to be digged ouer three seuerall times, a moneth or fixe weekes betweene enery time, the last to be about Al-hollantide, when the mast of Oake, Beech, or the chafts or keyes (as some terme them) of Ashe is ripe, and that the sap of Elmes be returned to the roote: then fet in euery of the said square yards, nine Acornes, or Beech mast, or the little roots of Elme, a foot betweene every of them, and more of the chats of Ashe, or of the rest not aboue three fingers deepe : the digging thereof three times over, and the fetting cannot cost aboue

aboue foureshillings. These being set, they must be weeded the first two yeares, twise in either Sommer, which may cost at every time twelve pence, foure shillings: the weeders not to come among the plants, but on the out side for treding of the plants: then after two or three yeares, in September when the sappe is in the roots, all the yong plants that grow may be taken vp to be planted in the hedges of the same close, reserving onely two in enery plot so set of the best like to be trees: then after fixe yeares when it may be perceined which of those two so left is like to be the best tree, take away the worst; and plant also in the hedges as aforefaid, and leave onely one being the best; the remouing of these plants may cost two shillings. The quickwood for the fence to make a good fence would be cut hard by the ground vpward with a knife for loofing the roots, when it hathstood two yeares: and so will the plants of wood being so cut and weeded, which may cost two shillings. The quicke wood being thus cut and weeded will grow more in one yeare then it could being vocut in three; so that in the fourth yeare after it is cut, it will be so thicke and so high, as no reasonable cattle can get through or ouer it. Thus the whole charge of a rhode cannot be about thirty fine shillings eight pence: admit it were forty shillings, it were not great in regard of the profite that will appeare to arise thereby. In the meane time, till the young plants in the rhode of ground be growne vp, past the taking hurt by cattell, which may be tenne yeares, three parts of the ground may be moved betweene the plants; fo that small losse may be taken by the ground so inclosed, or after three or foure yeare it may be eaten with theepe:

out at pleasure.

The charge thus being fet downe at the most, it followeth, to shew the profite that may arise thereby to the performer: first the fourescore trees growing in onerhode, till they be threefcore yeares old may well be worth at fifteene shillings a tree, three score pounds, which fourescore trees groweth after three pounda yeare, and fo the rest: for by that time it may be well supposed that a small tree may be worth fifteene shillings: the trees planted in the other three rhodes may be much better, by reason that one other rhode groweth to be fourescore yeares before they be felled, one other five score, and the last sixescore whereby they may be well worth the rate fet downe. In the hedges about twenty acres, there may be planted at the least fourehundred plants out of euery rhode, whereof if two hundred and fiftie doe but grow, which they will doe much the better, if they be cut when they have taken rootetwo yeares, as before is fet downe for the quicke-woods, being faued from hurt by the thornes or other wood that groweth in the hedge, or by some other meanes, that in discretion may be vsed, will so grow as they may be topped at fixteene years growth, and againe foure years after, ther by to faue them from the force of the winde; which if the tops be too great when they are young, they may be shaken loofe at the root by the winde, and so die. After which time euery eight yeares they may be lopped for fire wood, fo long as they are maintained; which loppe cannot be leffe worth

worth then fixe pence a tree, and enery two trees cannot be lesse then a load worth twelue pence. The number of the trees about the foure score acres, may be a thousand at the least, which ariseth at the rate set down to five and twenty pound every eight yeares : which wood groweth after three pound two shillings fixe pence a yeare. The mast that may yearely grow of the thousand trees in the hedges, and of three hundred and twenty in the fourerhodes, may very well be worth one yeare with another, and one tree with another, a penie a tree, and may be well rated to be worth yearly fine pound: the rather in regard that in plentifull years of mast, there may of them bee gathered, weh being dried of a Kylne, may be kept as Peafe and Beanes two or three yeares, to feede Hogges, and the mast of Beech will teede cattell and pullen, as may appeare by Deere and pullen kept in Parkes, especially Turkeyes.

Thus it appeareth to al men that there may be yearly raised in tymber sire wood and mast out of one acre
of soure score, eleven pound. If the soure score acres
be pasture, it may be surther improved: first, the soure
score cattel that is to be sommered in soure score acres,
they will be bettered at the least two shillings in a beast
yearely by their quiet being in the woodes, keeping
their slesh, that other wayes would be lost, being constrained by the extreme heat of the Sunne and slies for
want of shadow, to runne vp and downe the grounds;
and oft breaking out into corne, where they may doe
much hurt, and also running into the water, which is it
be a standing pond, and not a running water, they so
soile the water, as when they would drinke they cannot; the want thereof oft times breeds diseases among

cattell:

cattel, and further may be saued at the least foure yeare by the graffe that before was spoiled by the cattels running & foyling therof. And thus much all breeders and feeders will affirme, and so wil huswifes of their dairies. and by the shadow of the wood, & the clearnesse of the water, that the cattel may drink at wil, a better breed of cattell may be made. For those countries that want shadow or water, can neuer breede fairer cattell as may appeare by those countries that have far better ground then Lankashire, and yet cannot breede so good cattell. Thus all things being reasonably rated, it ap peareth, that by this manner of planting, the foure score acres are improued fifteene pound a yeare to particular planters, if there were but halfe so much profite, it were sufficient to induce all men to the planting of wood.

As for the generall good that may grow thereby to the Kingdome, that all the wants recited in the first page may be so supplied, as all such necessaries may be had plentifully at a reasonable rate, great losses that may come by burning of straw preuented, many more cattell in countries where they burne much straw for want of wood may be yearly bred, the soyle of them, and much more that is burned in many countries for want of wood may be employed to the manuring of ground, and great store of Lime in dountries where Limestone is, may be burned, wherby much more corn may be yearly got, by the Mast much corne may be yearly saued, the Coales neere the costs may be transported. And the whole Kingdome heereby may be preserved from the ruine that is greatly seared.

F the aforelaid directions shall seeme too chargeable to any, I have added hereunto fome others more agreable to the time, exceptable to all men, and in the opinion of most men so necessarie, as they are holden not worthy to be the owners of Groundes, that will not obferue them; in regarde that experience hath taught alf mento know, that in all ages, Bushes hath been, and will be (if they be preserved) in all Groundes, the very nurse of Trees: fo that all men may take notice hereby, that by the digging up of a foote square of ground in the middeft of any Tuft of Bushes, Briers, Gorsse, or Furres, as some tearme them, and therein to fet three of the Mast of Oake, Beech, or the cut boughes of Willow, or Elme, according to the directions fet downe in the tenth Page; or the Keyes of Ashe, according to the nature of the soyles: out of which three, it is not to be doubted, but one of them at the least will grow and prosper; if the Bushes be preserved till the Plantes be past taking hurt by Cattle. The like may be observed vnder every lone Bush, the Bush being so high growen as the Boughes thereof may be plashed to hang downe, so as they may defende the Plant.

The like Planting may be vsed in the bottome of every Quicke hedge, where they may be defended by the Thornes therein growing. The profite that may arise; thereby, is extant in many Countries, especially in Essex; which although there be generally greater store of Wood in that Countrie, then in any other Countrie of this Realme, they find such profit by their Lop-wood in their Hedges, as there the owners of Ground doth more nourish and preserve the Woods growing in their Hedges, then Northampton, Lester, Rutland, & other Countries doth: in which Countries, there is the greatest want of Timber & Firewood generally, then in any Countries of this Kingdome: Yet notwithstanding in those Countries, and other Countries, where the planting of Wood is more then needfull to be planted, they altograther inclose

and take in whole Parishes by a Fence of Thornes with litle or no Woodat all therein; to the great hinderance and loffe to the Common-wealth. And by alike planting in all Gorssie groundes where Gorsse groweth so natupally, as the owner thereof can in no wife destroy it great plentie of Timber, and Firewood, may be raifed, and the soyle improved, especially if the Wood be planted in Rowes, tenne yeards betweene enery Row, and in enery Row fourty foure, to as there may be fine yeardes besweene enery Plant one way, & ten the other. The number of the Trees that may be thus planted about the fides of any Ground, and in the Rowes, may be a hundred for euery Acre. Then after the Trees be growen vp patt the taking hutt by cattell, the Goiffe may be flocked up, the ground betweene the Rowes may be ploughed & fowen with Cornes and being Lymed, the Lyme togeather with the hadow of the Trees, will approuedly to destroy the Gorffe, as the ground wilbe recovered to be good Pasture. And in like fort, all Broomy ground may be improved.

Some tothis, hath objected; That if their Gorffewere thus destroyed, they should be indamnified thereby, in regard they have no better Fuell. To which I have answered, & given good farisfaction: that it is not intended that the Gorsse should be destroyed before the Wood be fo growen vp, as it may yeeld better Fuell, and better Rore. Other fay, that they have fett much Maft, and Kerpels of Apples, and other feedes, which never came to proofe; by reason that they were denowred by Mise. The remedie to prevent the same from Mile, Hogges, and other Varmine, is to dippe them in Tarre before they be fet; the scent thereof will preserve them. This kind of Planting, may be effected with so small a charge, and maintained with foilitle labour, as not any man that eit ther regardeth the content of their King, the good of their owne posteritie, or Common weakh, can in reason omit to observe.

OBIECTIONS.

T is obiected I know by many, that it is against a mans profit to preserve his woods, since they grow but after three shillings soure pence an acre yearly, when as the ground being converted to pasture, is worth tenne shillings an acre yearly: further it is said by divers, that in wood countries they have wood enough for them and their heires, as well for building as burning, let them plant wood that neede it: moreover it cannot (say they) be easily conceived how wood can be planted, in respect of the difference of soiles, or how plants enow may be gotten to plant the Kingdome withall, or how any such profite may be likely to arise: lastly, that there is Sea-coales enow to supply many wants thereof.

THE ANSVVER.

HE Obiections touching wood are true in part, as may appeare to all men, for that so great a spoyle and wast is made thereof, whereby the Kingdome is in danger to be ruinated thereby, if some provision be not speedily provided, but not in the whole, as would appeare, if a survey were taken of the timber now growing in this Kingdome, for it would be sound too true, that the sourch part hath not timber to matntaine and repaire the building thereof three score yeares, although no part thereof should be imploied for new buildings. Astouching the difference of soyles such as are ignorant therein, may herby know

D

that

that wood hath and will grow in the most part of all this Kingdome, being planted and preserved, as it ought, as first appeareth by the Peake countrey of Darby thire and other rocky countries, where there is yet to be seene Ashe-wood growing about every towne, and would be more in other places if it were planted and preserved. As for Oake, Beech, Elme, and Ashe, it will grow in flinty and gravelly ground, as it appeareth by the Chiltren country, as it is termed of many shires. Elme specially will grow best in grauelly ground, as appeareth euery way about London. And for fennish grounds it appeareth about the townes in those countries, that there is, and hath beene better store and would be, as well as hath beene, if it were planted, of Elme and Willow. The best manner of planting Elme and Willowis to loppe young bowes of three or foure yeares growth in the latter end of March, or the begins ning of Aprill, before the buddes put forth, being lopped presently, cut the bowes into lengthes of a foote long, being fure to leaue the knot where the budde is to put forth in the middelt, cut the bowes floping Coult footelike then lay the short boughs in trenches where you would have them to grow a yarde one from another, not about a hand breadth deepe, and couer them with good mould, being fure to lay the knot vpward, and not at all to cover it, and treade the mould fast to them, if the first and second Sommer be drie, then water them well twife a weekeat the leaft, and affuredly they will fo grow, that as of other wood, fo of Willow or Elme you may have shadow in some corner of a close for cattell, and great plentie of wood with leffe charge then other wood, for onely a good ditch

dirch will serve in such grounds as Willow may best be planted in, as for Elme it must be planted in harder ground, if they grow too thicke, as vindoubtedly they will. Some may be focut vp, as the cattell may have good roome to lye, and go betweene the trees, the Elme will grow to timber if it be not lopped. This kind of planting will sooner grow to bee trees, then boughes cut and let: The best letting of the boughes of any trees about Lammas, before the sappe returne toward the roots of trees, is with a knife to pare the barke of abough a hand broad, hard at the bodie of the tree, so cleane from the bough, as the sappe may not returne to the bodie, and a hand bredth next to the plot spared, lay a good quantity of clay two inches thicke, and a shafement broad at the least, and within the clay next to the barke a little better earth, being fure to bind the clay fast about the bough, so as when the bough is to be cut off with a fawe from the tree, which must be about the midst of September, at which time the bough must be sawne off hard by the earth, in which earth the lappe will have taken such roote, that if it be presently set with the earth about the top being a little cut off, will more affuredly grow to be trees for loppe wood then any other kinde of letting fets: by which meanes such fennes may have timber, firewood, and shadow & shelter for cattel, and so will the boughs of Apple, or Peare trees, and oft times beare the first yeare : prouided that the boughes be of the tallest and straightest. And as for Sea-coales, there is no assurance how long they may endure: it is apparant that Coalemines do decay too fast in most countries, and are too chargeable for many countries in respect of carriage,

and in most mines they are not to be got without the vse of much wood.

what further benefite may be made on sheepe-walks, Downes or Heathes, by planting of wood where the grounds are barren.

I F for example on enery Sheep-walke whereon there Lis, or may be kept fine hundred sheepe, there were plowed vp about Christmas twentie acres in the lowest bottome of the walke for this purpose, where water may be kept all the yeare, aswell for the breeding of Fowle, as for the other profits: all which may be maintained under one charge by the shepheard without, as it were a peece of corne, fencing of the same (for that on such Downes cattell seldome times come.) Being fo plowed let it lye till Midsommer: if then it be perceiued that there will be Mast that yeare, then plough it againe, and then let it lie vntill about Hallowmas: Then take the Mast of Oke, Beech, after the Chats or keyes of Ashe, bruised Crabbes, and the veriuice is pressed out, and hawes : mingle these together to sow about the fides and ends of the ground about a yard broad, and vpon the rest sow no Hawes, but some few kernels of Crabs, with the Mast. Thus being sowne, plough the ground vp into a little ridge, and plough under this Mast and Chars very shallow, then leave tenne yardes in breadth, and fow and plough one yard more, and fo from fide to fide. The rest of the headlands to lie till therest of the close is to be sowne in March with Otes, that the cattell may not hurt the mast sowne by treading on ir.

The

The close being thus fowen with Mast and Otes, in the meane time whilest the ground is in tilling, there would be a house builded for the Shepheard to dwell in, where he may best ouer-see the ground at his ease. The charge thereof, first, of the house fine pound, the plowing thrife and the harrowing, two shillings eight pence an acre, eight pound the Mast, and getting it readie, twentie shilling, for eight quarters of Otes to fow the ground foure pound, for the getting of Otes in haruest, and carrying of them into the barne fortie shillings, and the straw will thrash them, so the whole charge is twenty pound, the Otes will yeelde thirtie pound, if they increase but fixe for one. Then when the spring is of two years growth, there may be drawne vp part of the fpring, which may be imploied for quickfets: and when the remainder is fixe yeares of growth, there may be more drawne up to be fet in the fides and ends, if they be not so quicke as the owners would have them, leaving them foure score on either side, two in a poll, and in either end eight score, in every row foure and fortie, fine yards betweene enery one, and here and there to leave some speciall one that is like to be a fine tree for Timber, & some hundred or more of the Crab tree stocks to graft on, & so leave as there may be left at the least two thousand for to be lopped for fire-wood, foure scoure for Timber, and foure score to graft on. The two thousand may be topped as before, which at cuerie eight yeares end may be lopped for fire-wood: the tops of them cannot be so little worth after thirtie yeares, as fixe pencea tree, which rifeth to fiftie pound, the foure score for Timber may after three score yeares be worth fortie pound at tenne shillings a tree, the

fruit that may grow of fourescore trees at sixe pence a tree, fortie shillings by the yeare; and the ground being : before barren hardly worth twelue pence an acre). may be worth ten shilling an acre by the yeare : for by the graffe and weeds that wil grow the first fixe yeares, and the lodging of the sheepe in the night, when the weather is such as they cannot be folded, and the shadow of the trees, which are so to be planted, that there may be tenne yardes betweene enery tree, except in therowes, the ground will be made very good meadow, and will finde the sheepe hay enough with good winter pasture, and warme shelter in sharpe weather. And if water can be kept, there may be bred with twentie pound cost, sowle or pullen well worth twentie nobles by the yeare, all charges borne. If the plot for fowle be neare corne, then may there be best kept wilde Duckes and Mallards, which doe neuer hurt corne in the field.

If the planting of wood were on common Sheepewalks, Common pastures, and Commons where the
lands are so good as they might be sowen with Wheat
or Rie, with the Mast, the whole charge thereof would
be made in three yeares worth twentie pound gaine at
the least, by the croppe of Wheate or Rye, and a crop
of Otes after betweene the grounds, where the Mast
is sowne, as before is set downe. If the like provision
were made in Parks where wood decayeth, and hay is
scant for Deere, it would be very beneficiall to the owners, and by the planting of Commons, common pastures, or common Sheepe-walks by the charges of the
towne, wherunto such grounds doe belong, the charge
will be inned, as before is set downe, in three yeares, a
present

present reliefe raised by fowle to the poore of the town, of fixe pound thirteene shillings foure pence, and after tenne yeares, three pound fixe shillings eight pence at the least by fruite: fourescore trees to bee lest for Timber, and two thousand trees remaining to be lopped, which may yeeld wood worth fine pounds a yeare; by meanes whereof the townes (where such provision may be best made,) may not onely be greatly eased of the charge of their poore, but also have a stocke whereby they may be eased of such charges as may happen eyther to Church or King by increase of the stocke. By this manner of planting wood a prefident may be taken by fuch as are desirous to improoue their grounds, by flocking and stubbing vp their woods, to make as much profit of wood as now they doe, and have the profite of the ground, either to plough for corne, or to mow for hay betweene the rowes of wood, or to pasture it at the pleasure of the owner. And further take certaineknowledge that all barren and mossie grounds may be improved much, by letting three yeares graffe rotte on the ground Land it is the onely way next vnto Lime to destroy Mosse. The second grieuance is the dearth of victuals with remedie for the fame.

in regard that all kinde of victuals is rifen and growne more decrein price within thefe last lixe yeares, then in twentie yeares before: and it the dearth of victuals shall happen to increase but a few yeares to come (as by all likelihood it is like do doe) except some speedy remedy be provided, the poore man by his labours shall not get wherewith to relieue himselfe and family.

This

This dearth may be much eased, if that every one that hath a Pigeon house might be eniouned, or otherwise required to breed yearly extraordinary a certaine number of sowle or pullen, as shall seeme best to their liking. The manner and order shall be set downe by a plot for the purpose, how they may be bred with the charge and profite that may yearely arise to the owners.

The reasons whereof are fine: first, in regard that a plot to breede sowle or pullen in, which may be made and furnished with lesse charges then a Pigeon house, yeeldeth more profit, and nothing at all offendeth the people, wheras the Pigeons are a great cause of dearth, and more chargeable than profitable to the owners, and the losse that the kingdome receiveth therby is infinite, as at large shall be proved:

Secondly, that it is to be supposed that every one that is able to build a Pigeon house, is also able to make a plot for sowle or pullen to breed in, and either is or should be the Lord of the Mannor, who hath to his Mannor some convenient ground to make a plot on, for that purpose, and to breed so many pullen or

fowle yearly as he keepeth Pigeons.

Thirdly, where as a Pigeon house is builded for house keeping, the breeding of pullen is more profitable, as

shall be proued.

Fourthly, that the extreeme dearth of victuals caufeth many to breake vp houl keeping, and to put away their feruants, wherby many through want fall to stealing, and thereby come to an untimely end, so an extraordinary breeding of sowle and pullen, with other meanes as followeth, may by Gods bleffing so ease the

extre-

done in former ages, delight in hospitality; hereby preuenting many inconveniences that the extremity of dearth doth and may hereafter procure.

Fiftly and laftly, the profite of the fowle and pullen thall be proved to be free has no man of vinderstanding

will denie the performing thereof.

But now to proue the difference of the charge and profite betweenea Pigeon house, and a plot for fowle and pullence First, all men of experience know, that an ordinary Pigeon house of fine yards and a halfe square, and foure yardes high to the euclings; in which house there may be contained twelve score paire of Pigeons, will coft five and twenty pound at the least, and that it will be three yeares before it commeth to the best profite; and when it commeth to that, the best Pigeon house is seldome worth fine pound yearely, except it be within threefcore miles of London, where all victuals are deerer then in other places of the Kingdome, or a double house. I will not stand to make good the opinion of the multitude concerning the charge of one Pigeon, who will eate (if she have liberty) a quarter of corne a yere(I haue some reason to beleeue it, for that two credible persons did affirm vnto me, that they had lately seene halfe a pinte of corne at one time, taken out of an olde Pigeons croppe, and offered to make proofe thereof by witnesses of good credite): but we must admit of that which in common experience is not to be denied; which is, that Pigeons have corne at wil to feed on more then halfe the yeare : and admit there be tweluescore paire in a house of olde Pigeons, as commonly there is, and that every olde Pigeon in that time

time with her young ones should eate but two bushels, which commeth to fixescore quarters at a house : and it is generally holden that they hinder the increase of that which would grow, & spoile as much as they eate, from the time that corne groweth ripe in the field, before haruest be done, and the feed times. And thus in reason it doth appeare, that in all seed times of the yere there is at the least fixteene weekes, in which time shee gathereth vp much corne, that is left vncouered by the harrowes, which a shower of raine would cover, and so would grow: and naturally all Peafe and Beanes, if they fall not deepe in fowing, and be very wel couered, they will swell out of the ground, and lie bare upon the ground; and yet notwithstanding Pease and Beanes, and all other corn by nature groweth with the root first into the ground, and then springeth vpwards: so that after the feed times be done, and the corne groweth greene till it grow so high, that the Pigeons cannot go through it, they gather up the corne growing, and breake off the blades, and eate the corne: all which will be confidently proued by all Husbandmen and Gentlemen, especially by such as sometimes addict their mindes to vinderstand the profite of husbandry.

This being allowed (which by no meanes can be disproued) it appeareth that twelve score paire of Pigeons devoure, destroy, and hinder the increase of twelve score quarters of come in a yeare. Admit it were but halfe so much, and that the come were rated, being Wheat, Rie, Barley & Pease, but at two shillings and a penie the bushell, sixescore quarters commeth to a hundred pound yearely at a house. Admit surther, that the sixth part thereof be the owners of the Pigeon

house

house (for so it is to be supposed that the Lord of the Mannor hath a fixth part of the towne, then it followeth that his five pounds worth of Pigeons costeth him fixteene pound thirteene shillings and eight pence at the least. What other charge his Pigeons are voto. him, I forbeare to relate: the number of the Pigeon houses cannot be sewer then forty thousand, with the Pigeons kept at honses. Now to the charge and profite of fowle or pullen: the plot and all things therunto belonging, will not cost aboue twenty pound, to haue it conuenient and ready, that when occasion is to take some of the wilde kinde; the taking of those may not offend the rest that remaine behinde. The plot must be especially for the wilde kinde of Ducke and Mallard, which are best to be kept both for profite and pleasure, in a piece of ground where water is and may be got and kept all the yeare, of two and twenty yardes square, moted about with a mote of a rhode or poll of bredth, which wil be twenty poll in compasse: it ought to be made fixe foote deepe in the middelt, and something shallower towards the sides, which will cost at fine shillings a poll fine pound. The levelling of the ground, with quickfet and workmanship, foure pound, the house being five yardes square, and sixe soote high, and having a little chamber over it to keepe Oates in to feede them (the house it selfe being studded and thinly lathed, two fingers betweene the lathes) which house cannot cost aboue eight pound, and the bridge and doore twenty shillings.

The plot being made, put into it about Christmas threescore tame Duckes and twenty Mallards, which will cost about three and fifty shillings soure pence, or

at Candlemas for want of Duckes, forty Hens and ten Cockes, to remaine till Ducke egges be gotten to breede on in the meane time : there are neither the Hennes northe Duckes, but their egges will be worth the corne, branne, and draines that the young Ducklifigs must be fedde withall, till they can cate Oates. The plot being thus ready and all things elfe, fend one with ahorfe for egges in March into Cambridge shire, or Lincolne thire about Crowland Leuerton by Boston, Or thereabouts, into the Fennes, or into any other neeferplace, where wilde Duckes egges are to be got for money especially in the Fennes, if the people haue liberevio gerthem for in the fpring time when the wilde Duckes lay, the poore people will goe with a dogge into the Fennes, where their dogge will put up the fowle out of their neafts; and then if they finde any egges therein that be infifted, they will take most of them away with a ladle of by forme other means; fo that they neither handle the egges that they leave behinde, nor breath vpon them and then wil marke the place where the neaft is fo as they may readily conic to it, and once in a weeke will ferch all the egges that are laid in the meanetime, and so make the Ducke (whose nature is to lay till her neaft be full before the will fitte) to poore as they may take her which often ines the hungry inhabitants doe.) The egges being thus got ready, when the keeper of them feeth the Henne or Ducke feather Herneast, and beginneth to stre, then make up the number in the neaft twelve wilde Duck egges and thus in two yeares the whole number of the wilde or tame may be bredin fuch fort as they may be taken off at the owners pleafure, and a stocke of sourcecore of the oldelt

oldest to be lest for breeding with twenty Mallards: which fourescore olde Duckes will breed and bring vp commonly enery one of them eight at the least; the whole number to be three hundred and twenty couple, worth to be folde eight pence the couple; which ariseth to the summe often pound and a mark for their young ones. Then the egges that they will yearly lay, to be but worth fifty three thillings and foure pence, at fine a penie; and the fish that may be bred in the Mote yearely, to be worth thirteene shillings foure pence: Provided alwaies, that there be no Pikes bred in the More; for they will destroy the young fowle, but not the pullen. The whole fumme is fourteene pound: deduct out of the same fine pound, to buy ten quarters of Oates yearly; which ren quarters will allow the fowles aboue a bushell and halfe a weeke, which is more then is needfull to be spent on them: for except it be in frost or snow, when the ground is couered, or when they fitte, and the young ones are not able to flie a. broad, a very small quantitie will serve to give them euery morning a few, that enery one may get a douzen cornes to haunt them. As for their breed, being once well haunted, they will never away in the day, if they may be in quiet, but altogether in the night: by which meanes they are fafe from Vermine, and they will continue there especially in breeding time. For experience teachethall men to know, that all things that hath life, fourth best the place wherein it was bred, finding there rheir best reliefe and rest; as appeareth, that all the Winter (till breeding time) there are hardly one couple of Duckes and Mallards to be seene in the Fennes, but abundance in Sommer time, where they remainer E 3

vntill about Michaelmas, and then they go away again. Then further allow forty six shillings eight pence to the keepers, and towards the keeping of the hedge, the remainder is cleere (all charges defraied) sixe pound thirteene shillings and source pence. Thus is the proofe made betweene the Pigeons and the wilde Fowle, the one offensive, the other not.

The plot for tame will not cost so much by the charge of the house; for being tame, they may be taken

at pleasure.

The pullen will yeeld a greater profite : for there may belikewise kept at a like plot, sourescore Hennes, and twenty Cockes: admit euery Henne to breede yearely but eight Chickens, (though it will be graunted they will breed twife in cuery yeare, and at each time eight at the least) their number is three hundred and twenty couple, whereof eightscore couple, rated to be fold being Chickens at fixe pence the couple, make foure pound. Fourescore couple of Hennes at twelue pencethe couple, comes to foure pound, and fourescore couple of Capons at two shillings the couple, comes to eight pound. The egges cannot be leffe worth then eight pound at five a peny. And the fish that may be bred yearely in the Mote, will yeelde thirteeneshillings soure pence. The totall is twenty soure pound, thirteene shillings and foure pence; out of which deduct thirteene pound, to buy twenty fix quarters of Oates, whereby they may be allowed one weeke with another throughout the yeare, foure bushels. Allow further yearly foure pound to the keeper of the pullen, and the maintayning of the plot, although it be Supposed, that every one that will be at the charge of a-

ny of these plots, keepeth one that tendeth his pullen that he hath already; so that the charge hereof will be fo much the leffe. The house for pullen will cost about forty stillings more then a house for fowle, in respect that although the house may be two yardes narrower, yet it must be three yardes longer, with poles in ir, for the pullen to sit vpon. As for neasts they shall neede none in the house, but in borders, where they will take more delight to breede in then a house, and be freer from diseases, by reason of the aire; and therefore it shall not be necessary to have a chamber in that house, because the Keeper may bring the Oates at any time when he commeth to them. But the reason why a chamber is convenient in the house, wherin the fowle must be vsed to feed, is especially for the Keeper to stay privately in, to take some of the fowle at pleasure, without offending the rest. Thus all charges to the vttermost being set downe, the remainder is seuen pound, thirteene shillings, and foure pence by the yeare de cla-10 at the least, at a very cheaperate. The charge of the plot is vnder three yeares purchase for the pullen, and three yeares purchase for Duckes and Mallards. As for the manner of breeding of pullen and tame fowle, it is needlesse to set downe, onely thus much: For the tame, their charge will be as little or leffe then the wilde, if they be bred in large Pastures, where they may neither doe hurt to corne or meadow ground, which the wilde will neuer doe. The reason is, the wilde keepe in the water all the day, and feed altogether in the night, and dare not come neere corne: and their corne must be given them every morning a little, to draw them to their breeding place in the day;

whither they will not faile to come, being there bred and fed. It shall not be needfull to bestow much come upon the tame, but onely at their first being put into the plot, where they must be kept in for three weekes or a moneth: in which time being fed euery euening, they will likewise so know their being, that thither they will come in the night, and feed abroad all day, especially if they find that they sit quiet in the night; such is the difference of their kindes, the one feedeth by day, and the other by night. Now it remayneth to know how the wilde must be bred, when they have chosen their neasts, which shall appeare in the plot hereaster set downe.

After the fowle begin to lay once a weeke, their Keeper may come to their neafts when the fowles are off, which will be towards night; and for that purpose bring with them an Iron ladle, with a handle halfe a yardlong at the leaft, wherewith they may reach into the neafts of the fowle, and from thence take some of the eldest laid egges, as neere as they can geffe, leaving not about or under two or three, taking great heed that they neither handle them, nor breathe vpon them, for their nature is to finde that fault, and then they will forfake their neafts. Thus may the egges for the more profit be taken from them, so long as in discretion shall bethoughtfit, which commonly will be about some ten weekes, ere that they be perceived to feather their neast : and be sure in the meane time to keepe some egges, that hath bin neither handled nor breathed on: and if there want egges in any of the neafts, when it is perceived that they siz, then with the Ladle put in more and make the number twelve at the least. The manner now to take them is thus: The

25 he de e or in the of ne ne by ey gde to he oc ke us ht ay er d; at nd so he ild it is e-per

r

24 WI an vp the 211 wi co the fer oil wi ne do pe wł br ya the 110 th: for for pre be ter ne: cgi and per how to take them is thus: The

The house being made, as before is set downe, the dore therof must be thus made: A light frame of wood as can be made, to be as broad and so long as the dore stead is, being for the purpose a yard or thereabout, for that commonly is the breadth of Canuis or haire cloth. Then take (for the better lasting) so much haire cloth as the dore is of height, and make it fast to the frame of wood as a dore, which must be hanged like a shop-win. dow at the top of the dore stead, to be drawne up by a cord and a pulley, and so to stand. In the meane time the fowle must be vsed to be fed in the house, which by little and little they will eafily be brought vnto, if they be viually fed there, and some tame ones kept among them for that purpole, which for fundry causes I holde the fitter to breed on; especially they being not able to flie, must of necessity stay there, which will make the Duckes to refort thither for their mates: and some doe hold that the nature of the wilde Mallard, is to fucke the egges if he finde them : being thus vsed to have their corne in the house, which they may be brought vnto, wherof I could give many instances, but two may serve for breuity: one at St. Iames Parke, the other from Standish hall, the house from whence I descended; where wilde Duckes did breed about a Mote, which at the first were bred vnder a Henne, and both those and the breede of them, for many yeares continued so tame by vie, as they would have followed through the court belonging to the house into the hall, and so wild as vpon any offence they would have flowne to the riuer or ponds thereabout, and being flowne at, or otherwise there sturred, would have returned home.

The fowle being thus wonted to the house, the Kee-

per being determined to take any of them, may go into the house at pleasure, and call them thither, according to his wonted manner; the corne being strewed in the house, the Keeper may goe vp into the chamber, and there stay with the cord of the dore in his hand, as prinately as he can, and by degrees let the dore down, and when he perceiveth that most of the sowle are gone forth, then may he let the dore close downe, and so take them as quietly as may be, and no whit offend the rest. If all Noblemen and others of the better fort would put this in execution in Forrests, Chases, Parkes, great Pastures, and Commons, it would not only be very beneficiall for themselves in their house-keeping, but would likewise ease the extreme dearth of victuals, to the easing of this grievance.

Obiections against breeding of Fowle.

Hat such abundance of fowle by this meanes may be bred, that thereby corne may be made deare. Secondly, that they will destroy the increase of fish. Thirdly, that they will so foile the ground where they are bred, that the cattell will not eate the grasse.

The answer to this Obiection.

First, as touching the dearth of corne that by them may grow, that shall be answered hereaster in place for that purpose, and how more corne may be saued by the tenth part then they can spend, which is yearely destroyed by Vermine.

Secondly,

Secondly, that they doe not destroy or hinder the breed of fish, as it doth appear, especially in the Fennes of the Isle of Ely, where there is greater store of fish, then there is in any place of England, except it be in such like Fenny grounds: in which Isle there is more sowle then there is in all England besides, especially in spawning time, at which time they may doe most hurt, but at other times they can doe none: for after there is life in the fish, no swimming sowle can hurt them. And for the better satisfaction of all men in this point, let any man call to remembrance, whether ever he saw or

heard of a fish taken out of a wilde Mallards crop.

Thirdly, as touching their foyling of the ground, an instruction may be taken by all fennish Commons, where

instance may be taken by all fennish Commons, where they haunt, and by all other Commons where great store of Geese are bred and kept, where is to be seene the foile of the Geese to be thicke on the ground (and yet the cattell feeding among it) that in common reafon they cannot but gather some of it into their mouthes: though the foyle of Geefe is holden the most dangerous foile of all other fowle, yet did I neuer heare any complaine of any losse taken either by their foile or feathers, although in the moulting time, the Commons will feeme as it were strowed with feathers. And it is holden by many good husbands, that fowles, especially Ducks and Mallards do much good to ground and cattell, especially to Deere and Sheepe, namely, by gathering vp the wormes that lo sprout vp the carth in the night, which earth in grounds that are eaten bare, is beaten abroad with enery showre of raine vpon the fhort graffe, which commonly is the sweetest, whereon the Deere and Sheepe defire most to feede;

F 2

and thereby gather vp the earth that is so beaten on the grasse by the raine, which earth is holden by most skilfull men in sheepe, to be the principall cause of the rot: which the better may be conceived for as much as experience hath manifested, that seldome either Sheepe or Deere rotte in grounds deepe of grasse. Also Wormes live by the fat of the earth, and decay the strength thereof, (as all the great Gardiners do affirme) which sowle and pullen will destroy, especially wilded Ducke and Mallard, in respect that they altogether feed by night on the barest grounds, and vpon Worms most of all.

The second remedy for the dearth of Victuals, by planting of fruite.

TOr as much as by the experience that is taken out of I most of the countries of this Kingdome, especially out of some parts of Worcester shire, Glocester-shire, and Hereford-shire, where it is generally affirmed, that there be fundry men, that raise to their purses yearely two hundred pounds, by fruit trees growing in their hedges and fields, ouer and besides what he spendeth in his house in Syder and Perry : and that there are some Parsons that haue thirty or forty hogdsheads in a yeare for Tithe. And further it appeareth, that in most towns of this Kingdome, there have bin provident husbands that have planted Orchards, weh in effect are now decayed, which have not onely beene very beneficiall to themselues, but also to the Common-wealth, & there be yet some few that do plant, some an acre of ground, which is yearly worth fine pound at the least in fruite.

In

In respect whereof, and for other good considerations if it were prouided (in regard the like profite may be yearely raised in the greater part of this Kingdome, to the great profite of the Planters, and benefite to the Common-wealth, which will likewise bee a speciall meanes to disburthen vs of the greatest part of this grieuance, for that thereby the extreame price of Victuals will be greatly eased,) That there may be a certaine number of fruite trees, planted in all the Hedges, as of Apples, Wardens, and Peares, and most of all the Apples, where White thorne and Crabbe-trees doe or may hereafter grow being planted, viz. for every Acre of enclosed ground foure trees, which can no way bee hurtfull, or hinder any other profite whatfoeuer that may bee rayled out of Hedges. The fruite that by this meanes may be raised yearely, can not be lesse woorth (if all were enclosure ground) then twelve hundred thoufand pounds, if the fruite were fold for fixe pence a bulhell.

And this I may proue two seuerall waies, First, by experience taken from Crabs, it is knowne to all Hus-wives that a bushell of Crabs, will make two gallons and a halfe of Verivice, and so much some of the best Chandlers in London have affirmed to mee. I have also enquired of some of the better fort inhabiting in the Countries before recited, as I have travelled through those Countries for this purpose for my better experience, how much Sider a bushell of Apples will yeeld, or a bushell of Peares of Perrie; whose answers for the most part were, that a bushell of ordinary Apples, would at the first presse yeeld two gallons and a halfe;

F 3

and by putting a gallon of faire water into the Apples fo pressed, and letting it standsome twelve houres, sometimes stirring them, and then presse them againe, would yeeld another gallon, but not so good, so long

lasting as is at the first.

The second is this, that in a bushel there is about two hundred of the greatest Pipins, let some of them to the number of twentie be baked in a Pot for the purpose, or taketwentie of them and rofte, and that man will be holden for a monster, that can eate so many at one meale, which may be affoorded for a penny, and the surplusage being fourescore, will recompence the labour that is taken about them. By either of these meanes I hope it will be allowed, that of themselues they are worth the rate before set downe, and being baked in Paste, a good and profitable vse is made of them in many mens houses, by sauing other victuals; and when it pleaseth God to blesse those few fruite trees that are in this Kingdome, it will something abate the extreame prices of victuals. This present yeare may be an instance, and all Drouers of Cattell will affirme, that they have felt the finant of the plenty of fruite, and the inhabitants of the Citie of London will acknowledge, that the fruite that commeth thither, eafeth something the prices of victuals.

The greatest hinderance which may be to these good works of planting fruit, and wood, will be confessed of most men by their experience, who have in their times seene many men beginne to plant Orchards, and set quickwood, to the end to have hedges in many places, especially by high waies for the sauing of corne; and at the first will make some provision for the preserving

of the same, which afterwards some by coueting the grasse growing in the Orchard, putteth some kinde of cattell therein which breaketh and spoyleth the grasses others by want of maintaining the sences, whereby their expectation, cost and labour is lost, &s o inquick-wood after a great cost in planting, for a little more cost in maintaining, all is trodden downe and lost: in like sort much good spring wood is spoyled by cattell by want of sencing. Thus either by couetousnesse, niggardnesse, or negligence, many good actions are ouer-throwne to the losse both of the owner and Commonwealth, my counsell herein is to begin well, and to perseuere therein accordingly vnto the end.

Obicction against planting of fruite.

Irst, that if they be planted in hedges they will be stollen, and hedges broken for them.

Secondly, that fuch plenty of fruit would make

corne ouer cheepe for the Farmour.

Thirdly, that if the hedges were so thicke planted with trees, in closes or fields, that are not about sixe acres, they will be very hurtfull; for that if such closes or fieldes shall happen to be sowne with corne or mowne for hay, the trees will so keepe off the Sun and wind, that in wet haruests it will greatly hinder the drying of hay and corne.

Fourthly, that his land is his owne, and he will not be constrained to vse it otherwise then he listeth, and that such as haue a thousand acres or more in occupapation, may haue so much fruit as he shall not know

what to doe withit.

The answere to these objections.

He first I grant in part, that fruit being planted but in particular may be stollen, and little good may grow thereby, but being generally planted as is required, what cause may any charitable man haue to complaine? or what man complaineth in any of the countries before recited (from whence example for this purpose is taken) of stealing his fruit where the hedges are as thicke with fruit trees and other trees as is required? It is scarcity that causeth stealing, but in those countries the trees in the hedges hang as commonly full of fruit on the high waies fide as on the o. ther, and the hedges of fields and closes in those countries, and in some other countries are as thicke of fruit trees and other trees as are required, and yet not. withstanding such as have Corne or Hay in little closes make shift to get it drie. Thus the first and third is answered.

What charity is in the fourth, I referre to the censure of the indifferent Reader. For it is in reason to be
conceiued that hardly halfe of the people of the Kingdome hath not grounds to plant on, but would buy
them at the rate set downe, being cheaper then any other victuals, and by the plenty of fruit such store of
Syder may be made and kept without losse, vntill it
may happen that a deare yeare of corne may come,
which then may be spent in drinke, and the Barly may
be converted to bread corne, and by this meanes corne
may alwaies be sold at reasonable prices in this land.
This may be proved by the best Merchants who will

affirme

affirme that Syder will keepe seuen yeares. And by this meanes such store of Corne and Syder, may alwaies bee in the Realme, that treasure may bee brought into the land for Corne, Syder, and many other commodities that may be spared, whereby the Kingdome may be greatly enriched, and the cu-

stomes increased to the good of the King.

The second is idle: for what man of experience knoweth not but the Farmour that liveth by tillage, may either by feeding of beefes, muttons, hogs, pullen, and many other things that may be fed or bred by corne, may at all times (if he thinke corne too cheepe in the market) by these meanes a sufficient price of his corne bootie for the buyer and seller Moreouer, much more ground may be converted to the feeding & breeding of cattell and to daries, all which is (as the world now goeth) very conucnient, the rather for that by experience it hath beene continually seene, that whereas corne is deere one yearein seuen, yet for other fiue or fixe years, it is at a more reasonable rate then other victuals, which yearely rise in price, and seldome or neuer abate. And further if corne be very cheape, it may be transported as it hath beene, (with Perry and Syder into other countries,) so that if the Farmours should loose something in the prices of their corne, yet they shall gaine much more in their house keeping and other necessaries.

And whereas it may seeme distastivil to some to plant their fruite trees in the Hedges; admit that there should be an Acre inclosed, wherein may be planted sourcescore fruite trees, and every tree may have an elemen yardes roome to grow on, whereby the ground

may take no hurt by Weedes, which after ten yeares will yeeld one yeare with another, and one tree with another a bushell of fruit, rated as before at sixe pence the bushel, this profit wil amount to fortie shillings the Acre at that rate. Admit further, that the charge of inclosing of this Acre found about, being eight Rode of breadth, and twentis in length, should cost fouretene pence a rode, to have a good citch double or treble let with quicke Thornes, and hedged round about on the ourfide of the Ditch, which hedge will last well three yeares: at the two yeares end towards the latter end of March, cut the quicke wood vpward with a knife close by the ground, and weede the graffe cleane vp from about the rootes, the wood of the old hedge wil pay for the labour, and then the first charge is foure pound and foure shillings at the three yeares ende. Then hedge it new againe, which may cost thirrie and fixe shillings, that hedge will last well till the quicke wood bee past taking hurt, for that in those three yeares after it is cut, it will grow higher then it would doe in tenne yeares being not cut, and fo thicke that nothing can get through it. In the meane time whilest the Fence is in growing, if there be strewed in a Nursery the kernels of a hundred Apples, or kernels of Crabbes, or fet when (or before) the q licke wood is fet, there will be more fets then that ground requireth, which being well preferred, will be bigge enough in three or foure yeares to graft vpon. The charge being fixe pound, is but three yeares purchase.

For destroying of Vermine.

THe greatest deuourers of corne, of these kinde are Rookes, Crowes, and Sparrowes, the number which they destroy yearely. They also greatly hinder the increase of corne, which when they cannot finde it lying about the ground, they scratch it vp with their feete or picke it vp with their Bils, Bades, and Rootes; and when corne is eared, then if it happen to be laid, both Rookes and pidgeons light upon it & fo spoile it, that if it were worth forty shillings an Acre before, in one weeke they will make it not worth ten shillings the acre. One kind of these Crowes live much vpon Chickens and Foule, and by their Egs, & kill yong Lambes, and do much hurt besides. There are also many other. flying vermin, that destroy Phesants, Partridges, Fowle, Pullen and young Rabbers, which are Buzzards, Kites, Ring-tailes, & Pyes, all which or the most part of them may easily be destroyed in three yeares onely, by the pulling downe of their nests, in breeding time, not suffering any of them to breed, every man to vndertake for his owne ground vpon a penalty, to the vie of the poore of the Parish. Two other great spoilers of fowle, are the shooting in Peeces, and water Dogs; the one galleth more then they kill and ger, that are loft, so do Dogs when the Fowle are young, and in moulting time. And much Lead and Poulder might be aued, by reason that every man may have Hawkes meate by his Foule and Pullen.

OBIECTIONS.

fore mentioned are as hurtfull to the Common-wealth as is alleadged, and that many yeares since by Act of Parliament there was a special law made for the generall destroying of all kinde of vermine that could bee thought vpon, as Foxes, Badgers, Polecats, wilde Cats, Stotes, and all other whatsoeuer, which was as much as then was thought con-uenient.

THE ANSYVER.

Itroying of vermine aforesaid, and of other vermine, but so small an allowance was made that no man made account thereof: wherefore by allowing a good proportion for this businesse, they may be soone destroyed, and the charge soone ended, and then all vermine being destroyed, and Pidgeon houses suppressed (excepting onely such as are allowed by the common lawes of this kngdome) it cannot be imagined that corne or any thing else for the releese of man can be deare in this land, without God doe altogether take away his blessings.

Of Wood.

FIRST it is sufficiently proued, that Wood being generally planted for euerie Acre of this Kingdome,

Kingdome, being at least foure and twenty millions of acres, that woodland may be planted in ; the worth thereof ariseth to sourteene hundred thousand pounds by the yeare: admit that the fourth part of the Kingdome be already replenished, yet the gaine by firewood and timber of the other three parts will arise to eighteene hundred thousand pounds. The timber and fire-wood that shall be planted in pasture ground, as aforesaid, will be clearely gained by the better breeding and feeding of the number of cattell more than may be bred by the pasture and straw, that may be saued, which is now spoiled & burnt, the worth of cattell fo bred, may be two hundred thousand pound yearly at the least. Al which may be effected with lesse then three yeares purchase in pasture and meadow grounds, and the whole charge of planting wood in barren ground may be recovered in leffe then three yeares, with tenne pound gain, as it is proued; & after ten yeares the soile may be improved from twelve pence an acre yearely to tenshillings an acreyearely. The fire-wood of two thousand trees being wel husbanded, will be worth fixe pence a tree at every eight yeares end, which rifeth to fifty pounds. The ground is improved ten pound yearly: and the foure score trees remaining will be better worth then forty pounds after threescore yeares, and by the fruit after ten yeares forty shillings a yeare.

Of fruite.

It is also proued that fruit trees may be planted in twelve millions of acres at the least in this Kingdom, which being rated at two shillings an acre, sixe pence a

 G_3

tree, the value whereof comment to twelve hundred thousand pounds yearly; out of which being deducted for the fruit already planted in this Kingdome two hundred thousand pounds, yet there remaineth one million of pounds gained yearly: the fruit trees which may be planted in Orchards, may be gained in three yeares, and in hedge rowes in one yeare.

Of fowle and pullen.

Sconcerning the breeding of fowle and pullen, it is likewise proued, that there may be well bred so many as will be worth five hundred thousand pounds yearely in this Kingdome, after the rate of eight pence the couple one with another, and that provision being made for the destroying of Vermine, there will be fowles enow soone bred in this Realme, and that if every owner of Pigeons should yearely breed so many fowles or pullen, as they keepe olde Pigeons, and every man that hath grounds conuenient would make plots to breed on as is aforefaid, it would greatly ease the dearth of victuals, the charge whereof may be recourred in three yeares. For the better understanding how the profits may arise, it is to be noted, that it appeareth by the generall map of this Kingdome, that it containeth twenty nine millions five hundred fixty eight thousand acres, out of which number deducting five millions, and the odde thoufands of acres for high wates, wildelying grounds and walts not fit for planting, there remaineth foure and twenty millions; which being rated at a peny an acte, amounteth to an hundred thousand pounds.

Suppressing of Pigeon-houses, and destroying of Vermine.

A Nditis likewise proued, that by suppressing halfe the Pigeon houles of this Realme, and of Pigeons kept ouer gates, chambers, and other places for that purpole, there may be yearely faued fo much corne as is worth two millions of pounds at the least, which they destroy and spoile: which may be effected without charge: and that by the destroying of feathered fowles, which in like fort destroy and denoure corne, and hinder the increase of the same, there may be faued as much corne yearely in this Realme, as is worth three millions of pounds. By the destroying of the before recited Vermine, there may be faued in fowles and pullen and egges, which they destroy yearly, the worth of fine thousand pound at the least, befides young Fawnes, Lambes, Rabbets, and many other things by them destroyed. I can make proofe where there were within this three yeare, seuen dozen couple of Rabbers found on a heape, carried together in lesse time then a moneth by a Store. Also by a generall destroying of Rats and Mice, there may be faued yearely in bread cheefe, corne, and other things which they devoure and destroy, foure hundred thousand pound at the least. I have knowne some one man lose forty pounds in a yeare, by keeping corne hoping for dearth, by Mice and Rats (too many fuch therebe) which twenty shillings in time bestowed would have faued. All, or the most part of which Vermine may be destroyed with lesse cost then the losse which is sustained

ned by them in one halfe yeare, by allowing a good proportion to every man that destroyeth them, as well yong and olde, as their egges and neasts: which would incourage servants and poore men to be industrious, in destroying the said vermine, and so the worke would soone be finished, and the charge ended: for money maketh men to labour.

Summe, nine millions, two hundred thousand pound saued and gained by this proiect yearly to the performers, besides the good that may grow thereby to the Common-wealth.

That it might be prouided that no Tenant should be indamnified by their Land-lords, by letting any of their Farmes, whereupon they have planted wood or fruite, before they have received sufficient profit of their labour, without sufficient recompence for their charge.

FIN IS.



